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Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Use of Spectrum Bands Above 24 GHz for Mobile Radio Services
GN Docket No. 14-177; IB Docket No. 15-256; WT Docket No. 10-112; IB Docket No. 97-95

Dear Ms. Dortch:

On November 1, 2017, Greg Romano and I met with Louis Peraertz in Commissioner Clyburn's office and separately with Rachael Bender in Chairman Pai's office to discuss the FCC's plans to adopt a Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order in this proceeding. We noted our appreciation for the Commission's continuing work to unleash millimeter wave spectrum for 5G use and offered some comments on the *Spectrum Frontiers 2017 Draft*.[1]

The *Spectrum Frontiers 2017 Draft* would take another incremental step to encourage 5G deployment by making 1.7 GHz of spectrum in the 24 and 47 GHz bands available for mobile terrestrial use.[2] Including those bands in the FCC's calculation of millimeter wave spectrum aggregation also makes sense, at least until the FCC can abolish millimeter wave spectrum aggregation limits and thresholds altogether in favor of a market-based approach, as proposed in the *Spectrum Frontiers 2017 Draft*.

We also noted our support for the proposal to grant CTIA's request to rescind the cybersecurity certification requirements in Rule 30.8.[3] The Commission did not provide prior

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[1] *See Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*; *et al.*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order [*as circulated*], GN Docket No. 14-177, *et al.*; FCC-CIRC1711-02 (circ. Oct. 26, 2017) ("*Spectrum Frontiers 2017 Draft*").
[2] *See id.*, ¶¶ 46-73.
[3] *See Spectrum Frontiers 2017 Draft*, ¶¶ 106-109 & n.256.

adequate notice before it imposed these requirements in the *Spectrum Frontiers Order*,[4] nor did it offer a reasoned explanation for doing so. And the certification requirements themselves are ambiguous and confusing, while presenting a practical problem on timing. The certifications are required six months prior to 5G deployment, which could hamper Verizon's plans for a limited commercial 5G deployment in 2018.

But the *Spectrum Frontiers 2017 Draft* also includes unnecessary concessions to the satellite industry that rely on arguments that the Commission has already considered and rejected.[5] For example, in addition to preserving a full 4 GHz of spectrum in the 40-42 and 48-50 GHz bands for satellite use, the draft order expands on the compromise in the *Spectrum Frontiers Order* that provided satellite companies a windfall by creating interference zones around grandfathered and new earth stations in 28 GHz under particular conditions.[6] The Commission created these protections for satellite providers despite noting correctly that "[s]atellite operators deployed in this band knowing that they were secondary licensees with respect to LMDS, that the Commission had chosen to allow only limited satellite use, and that the Commission had long envisioned allowing mobile use in the band."[7]

In addition, prior to last year's *Spectrum Frontiers Order*, satellite operations in the 37.5-40 GHz band were co-primary, but operators could deploy satellite gateway earth stations only if they held a 39 GHz terrestrial license or had an agreement with the terrestrial license holder.[8] In the *Spectrum Frontiers Order*, the Commission expanded satellite operators' rights by adopting changes to the licensing framework to allow additional satellite use of the spectrum on a "first-come, first-served basis" with minimal conditions.[9] Yet now the *Spectrum Frontiers 2017 Draft* would expand these rights further by increasing the protection zones for satellite earth stations in many areas through arbitrary classifications of geographies and populations affected. It expands the number of earth stations in 39 GHz band fivefold, from the compromise position of three per PEA to up to 15 per PEA and three per county. This change is despite the Commission's acknowledgement in the *Spectrum Frontiers Order* that, if permitted on a county basis, exclusion zones required in the 39 GHz band could be a proportion of the population of a county "that could seriously impair the growth prospects for mmW mobile."[10] Granting further concessions to the compromise already reached more than a year ago would go too far to benefit the satellite industry at the expense of 5G deployment in the United States

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[4] *See Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*; *et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 (2016) ("*Spectrum Frontiers Order*").
[5] *See* 47 C.F.R. § 1.429(l)(3).
[6] *Spectrum Frontiers 2017 Draft*, ¶¶ 110-132.
[7] *Spectrum Frontiers Order*, ¶ 47.
[8] *See Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Notice of Proposed Rulemaking, 30 FCC Rcd 11,878, ¶ 161 (2015).
[9] *Spectrum Frontiers Order*, ¶ 93.
[10] *Id.*, ¶ 91.

The satellite industry is now even pushing for a third round of concessions, arguing that earth stations also deserve protection in transient population areas.[11] But, as the *Spectrum Frontiers 2017 Draft* recognizes, those are exactly among the areas that will demand new, advanced terrestrial services.[12] 5G deployment would be completely undermined if earth stations were granted protection in such areas.

We also explained why the Commission would be wrong to deny Nextlink's request to apply the flexible-use rules to the A2, A3, and B portions of the LMDS band as proposed in the *Spectrum Frontiers 2017 Draft*.[13] Allowing flexible use of those bands would promote investment and innovation in 5G technologies and avoid unnecessary inefficiencies.[14] Those inefficiencies would inhibit the most advanced and productive use of the bands, and create uncertainty about how to comply with different operating rules and performance requirements that apply to different portions of the same band. The *Spectrum Frontiers 2017 Draft* notes concern that "further study would be required" to consider whether reclassifying the 31-31.3 GHz band would provide sufficient protection of adjacent bands.[15] If the Commission believes that the Reed Engineering Study that Nextlink submitted[16] and other record evidence reaching similar conclusions[17] is not conclusive, it should then include a request for more information on reclassification in the appropriate section of the *Spectrum Frontiers 2017 Draft*.

We look forward to the Commission taking another step to encourage 5G deployment, which can be enhanced by making targeted changes to the *Spectrum Frontiers 2017 Draft*.

Sincerely,

[11] *See* Letter from EchoStar Satellite Operating Corporation and Hughes Network Systems, *et al.*, to FCC, GN Docket No. 14-177, *et al*. (Nov. 2, 2017).
[12] *Spectrum Frontiers 2017 Draft*, ¶ 126.
[13] *See Spectrum Frontiers 2017 Draft*, ¶¶ 214-221.
[14] Nextlink Wireless, LLC, Petition for Reconsideration or, in the Alternative, Clarification, GN Docket No. 14-177, *et al*. (Dec. 14, 2016).
[15] *Spectrum Frontiers 2017 Draft*, ¶¶ 219-221.
[16] *See* Reed Engineering, *Co-existence of 5G Mobile Service and RAS, EESS, and SRS at 31 GHz* (April 2017) *attached to* Letter from Nextlink Wireless, LLC, to FCC, GN Docket No. 14-177, *et al*. (April 20, 2017); *see also id*. (Oct. 17, 2017).
[17] *See Co-existence of Mobile Broadband Operations*, T-Mobile USA, Inc., GN Docket No. 14-177, *et al*. (Oct. 2, 2017).